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Date: Thu, Jun 21, 2007 12:07 PM
Subject: Letter on accounting of purchased water on Republican River

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EXHIBIT
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CASE # Deposition
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STATE OF NEBRASKA

Dave Heineman
Governor

DEPARTMENT OF NATURAL RESOURCES
Ann Bleed
Director

June 21, 2007

IN REPLY TO:

Stephen Ronshaugen
Acting Area Manager
U. S. Bureau of Reclamation
Federal Building, 203 West 2nd Street
Grand Island NE 68801-5907

Daniel L. Smith
Republican River Basin Coalition
Republican River Natural Resource District
P.O. Box 81
220 Center Avenue
Curtis, NE 69025

SUBJECT: Accounting for Water Not Used in 2007 by the Riverside Irrigation District, the Frenchman Valley Irrigation District and the Frenchman-Cambridge Irrigation District in Accordance with the Agreement between the Irrigation Districts and the Republican River Basin Coalition

This letter describes the procedure that will be used to account for the water that will be available for use by Kansas as a result of the Republican River Basin Coalition entering into an agreement whereby the Frenchman-Cambridge Irrigation District, the Riverside Irrigation District and Frenchman Valley Irrigation District will not utilize a portion of their existing water supply for irrigation of district lands during the 2007 irrigation season. In the case of the Riverside Irrigation District and the Frenchman Valley Irrigation Districts, the lease is for natural flow water. In the case of the Frenchman-Cambridge Irrigation District the lease is for both natural flow and storage water.

The Nebraska Department of Natural Resources will provide an accounting of the purchased natural flow and storage water that will be protected from use by other surface water diverters in each reach of the river. This water will be protected from the point the water would have been diverted, or in the case of the Frenchman-Cambridge Irrigation District, from the point of release from Harry Strunk Lake, to Harlan County Lake. Protected water released from Harlan County Lake will be protected to the Kansas-Bostwick Diversion at Guide Rock in the same manner that storage water released for Kansas-Bostwick is protected. Any Frenchman Valley and Riverside Irrigation District protected water passing Guide Rock minus any carriage losses will be protected from the Guide Rock Diversion Dam until it passes into Kansas near the Hardy gage.

It is the Department's understanding that the U. S. Bureau of Reclamation will be willing to account for and store in Harlan County Lake any protected natural flow or storage water resulting from the assignment of water from the Frenchman-Cambridge Irrigation that is not immediately used to meet the demands of the Kansas-Bostwick Irrigation District. It is also our understanding that the protected purchased water from Frenchman Valley Irrigation District and Riverside

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Irrigation District cannot be stored in Harlan County Lake but will be passed though Harlan County Lake.

The Temporary Assignment No. 1 Contract No. 009D6B0122 between the U. S. Bureau of Reclamation, the Frenchman-Cambridge Irrigation District, the Kansas-Bostwick Irrigation District No. 2 and the Republican River Basin Coalition is premised on the assumption that the delivery, protection and accounting of the assigned water will not reduce or diminish the water use benefits of the Nebraska-Bostwick Irrigation District's water supply that would have been received as a result of normal irrigation water deliveries from Harry Strunk Lake and will otherwise be in accordance with the National Environmental Policy Act and other federal and state laws. Based on this contract as well as other state laws, the water from Riverside Irrigation District, the Frenchman Valley Irrigation District and the Frenchman-Cambridge Irrigation District that will be protected from diversions by Nebraska surface water irrigators will be that which would not have returned to the Republican River or its tributaries if the water had been diverted and used for the irrigation of lands in accordance with the districts' permits from the Nebraska Department of Natural Resources. To determine the percentage of the water that would have been diverted and would not have returned to the river as a result of normal deliveries for irrigation, the Department will use the same accounting procedures as described in the Republican River Settlement. These procedures assume that 60% of the diversion to the Riverside Irrigation would not have returned to the river. For the Frenchman Valley Irrigation District and the Frenchman-Cambridge Irrigation District, the percentages of the diversion that would not have returned to the river are based on measured diversions from the river into the canal, measured field deliveries, and assumptions of how much of the water that was lost from the canal or the field would have returned to the Republican River. The details of this procedure are described in Attachment 7 in Appendix C of the Republican River Basin Final Settlement Stipulation (See Attachment A).

Using this methodology at a meeting on June 20, 2007 representatives from the Bureau of Reclamation, the Republican River Basin Coalition and the Department of Natural Resources mutually agreed that the consumptive use amounts of water that would have been diverted by each irrigation district entering into an agreement with the Republican River Basin Coalition that will be protected are as follows: Riverside Irrigation District, 60% of the diversion; Frenchman Valley Irrigation District, 50% of the diversion; and Frenchman-Cambridge Irrigation District 57% of the diversion. In addition, in each reach of the river, the conveyance losses from evaporation and any additional seepage loss in each reach of the river will be subtracted from the water to be protected from diversion in proportion to the percentage of the total flow that is attributable to the protected water. (For more information see Attachment B.) Based on these percentages, the amount of water that will be made available to Kansas in 2007 as a result of these contracts will be approximately 84% of the Riverside Irrigation District diversion, 80% of the Frenchman Valley Irrigation District diversion and 83% of the Frenchman-Cambridge Irrigation District diversion minus any carriage losses.

The Department of Natural Resources will provide a timely accounting of the water to be protected and will work closely with the U. S. Bureau of Reclamation to assure protection of this water.

Sincerely,

Ann Bleed

Ann Bleed, Director

ATTACHMENT A

Attachment 7: Calculations of Return Flows from Bureau of Reclamation Canals

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9	Col 10	Col 11
Canal	Canal Diversion	Spill to Waste-way	Field Deliveries	Canal Loss	Average Field Loss Factor	Field Loss	Total Loss from District	Percent Field and Canal Loss That Returns to the Stream	Total Return to Stream from Canal and Field Loss	Return as Percent of Canal Diversion
Name Canal	Headgate Diversion	Sum of measured spills to river	Sum of deliveries to the field	+Col 2 - Col 4	1 -Weighted Average Efficiency of Application System for the District*	Col 4 x Col 6	Col 5 + Col 7	Estimated Percent Loss*	Columns 8 x Col 9	Col 10/Col 2
Example	100	5	60	40	30%	18	58	82%	48	48%
Culbertson					30%					
Culbertson Extension					30%					
Meeker-Driftwood					30%					
Red Willow					30%					
Bartley					30%					
Cambridge					30%					
Naponne					35%					
Franklin					35%					
Franklin Pump					35%					
Almena					30%					
Superior					31%					
Nebraska Courtland					23%					
Courtland Canal Above Lovewell (KS)					23%					
Courtland Canal Below Lovewell					23%					

*The average field efficiencies for each district and percent loss that returns to the stream may be reviewed and, if necessary, changed by the RRCA to improve the accuracy of the estimates.

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Attachment B

Notes:

Water accounting will start on the date indicated in the applicable agreement.

Only the portion of the water that would have been consumed if diverted is protected from diversion by other surface water users.The entire FCID water is protected from its release from Harry Strunk Lake down to the Cambridge Diversion Dam.

Amount of water purchased from Frenchman-Cambridge is released water from Harry Strunk Lake as measured at the river gage below the dam. Amount is 26,000 acre-feet. Releases from Harry Strunk Lake will mimic a normal irrigation season. Maximum Canal capacity is 325 CFS

Amount of Water Purchased from Frenchman Valley (up to 8000 acre feet) = Frenchman Cr at Palisade + Stinkingwater Cr. One day totals will be capped at the legal natural flow diversion rate for Frenchman Valley Irrigation District.
Amount of water purchased from Riverside = 2000 acre feet. This is assumed that 9.6 cfs will be available at the Diversion for 105 days starting on date indicated in agreement (or signed).

The consumptive use portion of the purchased water that is protected will be based on the percentages of consumed water in the Compact Accounting formulas. Riverside is 60% of Headgate is CBCU, Frenchman Valley average from 2001 to 2005 is 35.6% CBCU

Carriage losses include surface water evaporation and any additional loss in the section, if any. The additional loss is determined by subtracting the inflows to the section from the outflows to the section. If the result is a positive, there is no additional loss to the purchased water above evaporation. if it is a negative, the section loss will be included in the carriage losses assigned to the purchased water

The percentage of carriage losses assigned to the purchased water will be based on the percentage of the purchased water in each section as part of the total flow in the section.

The total flow in the section is the maximum of either the total inflows to the section or the total outflow to the section.

The total amount of FCID purchased protected water arriving at Harlan County Lake will be assigned to a special purchased water account for Kansas Bostwick Irrigation District (KBID) if stored. Any natural flow purchased from Frenchman Valley and Riverside that arrives at Harlan County Reservoir will be passed through when releases are made for KBID. Any remaining inflow to the Lake will be split between Nebraska Bostwick Irrigation District (NBID) and KBID according to the usual Bureau of Reclamation accounting procedures.

The Department of Natural Resources will provide a timely accounting of the water to be protected and will work closely with the U. S. Bureau of Reclamation to assure protection of this water.

When the first storage water is released from Harlan County Lake, 12,500 acre feet of NBID water will be assigned to the KBID Purchased Water Account.

If KBID is taking water from or thru Harlan County Lake, the priority of use is 1) the consumptive use portion of the purchased water from Frenchman Valley and Riverside 2) the consumptive use portion of the purchased water from FCID and 3) NBID purchased water.

At the end of the irrigation season, any water remaining in the KBID Purchased Water Account will be carried over in that account for the next irrigation season.

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